

THE CHALLENGE:

For its particular technology focus area, each Institute should be designed to address issues related to the “industrial commons,” or the collective research and development (R&D), engineering, and manufacturing capabilities that sustain innovation. This includes addressing shared problems throughout the supply and/or value chain and across multiple end-use applications. The stage of the selected technology areas is envisioned to be within TRL 4-7, whereby process economics are further clarified and scale-up issues are better defined and quantified. Further, the Institutes should have strategies for transitioning and implementing to larger-scale production beyond Institute operations.

Topics: Based upon the concepts presented within the published NNMI design report, how would you address the following topics?

- 1. How could a proposing team select a well-defined focus area that meets both industry and national needs? What metrics could be used to help justify the selected focus area(s) and scale of effort?**
- 2. How would you design an Institute with a regional focus and position the Institute to create national/international technical preeminence? Is it possible to do this with an industry, technology, or process and product focused Institute agenda?**

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Other Topics or Input

CAFÉ DISCUSSION 2: *INSTITUTE STRUCTURE AND GOVERNANCE*

THE CHALLENGE:

Each Institute is envisioned to be a public-private partnership composed of many different types of organizations. Also, each Institute is envisioned to have a clearly defined mission, goal, and structure. Consequently, it is important for each Institute to function under a coherent framework with well-managed operating procedures that allow for flexibility. It will be important for the Institutes to demonstrate the capability to manage the complexity and diversity of the participating entities for successful Institute performance.

The topics below are intended to assist in the formulation of individual participant input and should not be construed as a limitation on the discussion or as a limitation on the topics participants may wish to address in their written or verbal inputs. Participants are encouraged to identify best practices, and provide recommended strategies and approaches, when appropriate, as a part of their input.

Topics: Based upon the concepts presented within the published NNMI design report, how would you address the following topics?

- 1. The NNMI preliminary design calls for an Institute to be led by an independent, not-for-profit organization. How then should an Institute leverage academic and regional resources, interface effectively with these and other key stakeholders, and manage intellectual property obligations?**
- 2. How should participation by non-domestic organizations be managed to maximize impact to the United States? For example, how might an Institute manage participation by a multi-national organization? Should a non-domestic organization participate in or lead a project?**

Other Topics or Input

CAFÉ DISCUSSION 3: *STRATEGIES FOR SUSTAINABLE INSTITUTE OPERATIONS*

THE CHALLENGE:

Each Institute would be catalyzed through an initial investment from the Federal Government. Each Institute should have a plan and strategy for private sector co-investment and should maintain robust performance beyond the initial federal investment. Institute members will need to demonstrate the necessary financial and strategic commitment to ensure successful operation.

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Topics: Based upon the concepts presented within the published NNMI design report, how would you address the following topics?

1. How can an Institute sustain its operations beyond the 5-7 year mark?
 - a) How can an Institute unlock private investment? What strategies could be followed to attract partners, with particular attention to infrastructure and shared-use facilities, training and education, and other Institute “products”?
 - b) What might a sustainable Institute budget look like? How would an Institute’s diverse funding sources evolve with time?
- 2) What might be some go/no-go criteria for uninterrupted flow of NNMI funds to an Institute?

Other Topics or Input

CAFÉ DISCUSSION 4: *EDUCATION AND WORKFORCE DEVELOPMENT*

THE CHALLENGE:

The availability of qualified workers is essential to the scale-up of new manufacturing technologies. Manufacturing competitiveness in an era of rapid technological and market change requires workers to have advanced skills and the foundational knowledge to quickly obtain new skills. Developing and enhancing the skill set of current, displaced, and new employees will be critical for Institute success.

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Topics: Based upon the concepts presented within the published NNMI design report, how would you address the following topics?

- 1. How can an Institute exercise industry leadership with other key stakeholders in workforce training and development?**
- 2. How should an Institute be responsive to a region's workforce development and training priorities, and pursue initiatives that are responsive to the nation's needs?**

Other Topics or Input